

Abstract of the Disclosure

An optical switch includes: at least a light transmission portion, an optical path-changing portion and an actuator

5 portion. The light transmission portion has a light reflecting plane provided on at least one part of a plane facing the optical path-changing portion to totally reflect light, and light transmission channels having optical wave guiding bodies and being provided in at least three directions with the light

10 reflecting plane as a starting point. The optical path-changing portion is provided in proximity to the light reflecting plane of the light transmission portion in a movable condition and has an optical path-changing member for at least reflecting or scattering light. The actuator portion has a mechanism that is

15 displaced by external signals and transmits the displacement to the optical path-changing portion. The switching or dividing of an optical path is carried out by contacting or separating the optical path-changing portion to or from the light reflecting plane of the light transmission portion by displacement of the

20 actuator portion in response to the external signals. An input light from the light transmission channels is totally reflected at the light reflecting plane of the light transmission portion, and it is transmitted to a specific light transmission channel on an output side when the optical path-changing portion is separated

25 from the light reflecting plane of the light transmission portion.

Or an input light is taken from the light transmission channel, is reflected or scattered at the optical path-changing portion, and it is transmitted to a specific one or more light transmission channel(s) on the output side when the optical path-changing
5 portion is contacted to the light reflecting plane of the light transmission portion. This optical switch allows low power consumption, makes possible high-speed response, size reduction and high integration, significant reduction of signal attenuation and, furthermore, switching per specific input light.